

Title (en)
TWO-DIMENSIONAL CODE READING DEVICE, METHOD FOR READING TWO-DIMENSIONAL CODE, METHOD FOR MANAGING MANUFACTURE HISTORY INFORMATION ABOUT MEMBER WITH SUBSTANTIALLY CIRCULAR SHAPE OF SECTION PERPENDICULAR TO CENTER AXIS, AND METHOD FOR MANUFACTURING THE MEMBER BY USING THE MANAGING METHOD

Title (de)
EINRICHTUNG ZUM LESEN EINES ZWEIDIMENSIONALEN CODES, VERFAHREN ZUM LESEN EINES ZWEIDIMENSIONALEN CODES, VERFAHREN ZUR VERWALTUNG VON HERSTELLUNGSVORGESCHICHTEINFORMATIONEN ÜBER EIN GLIED MIT IM WESENTLICHEN KREISFÖRMIGER FORM DES SCHNITTS SENKRECHT ZUR MITTELACHSE UND VERFAHREN ZUR HERSTELLUNG DES GLIEDES DURCH VERWENDUNG DES VERWALTUNGSVERFAHRENS

Title (fr)
DISPOSITIF DE LECTURE DE CODES BIDIMENSIONNELS, PROCÉDÉ DE LECTURE D UN CODE BIDIMENSIONNEL, PROCÉDÉ DE GESTION D INFORMATIONS HISTORIQUES DE FABRICATION RELATIVES À UN ÉLÉMENT DE SECTION DROITE SENSIBLEMENT CIRCULAIRE, ET PROCÉDÉ DE FABRICATION DE L ÉLÉMENT À L AIDE DU PROCÉDÉ DE GESTION

Publication
EP 2296102 A4 20151111 (EN)

Application
EP 09770141 A 20090623

Priority

- JP 2009061368 W 20090623
- JP 2008166930 A 20080626

Abstract (en)
[origin: EP2296102A1] [Problem to be Solved] Provided are a two-dimensional code reading device and a two-dimensional code reading method for reading a two-dimensional code carved in a member having a substantially circular section orthogonal to the central axis thereof, as well as a method of controlling manufacturing history information using the reading device and a method of manufacturing the member using the control method. [Solution] A concave portion 11 carved in the member on which a two-dimensional code 10 is formed has a pair of a first inclined portion 12 and a second inclined portion 13 which are inclined so as to form an angle α with respect to a normal-line direction R of a surface of the member. A two-dimensional code reading device 20 is provided with image pickup means 22 which receives light reflected from either of the first inclined portion 12 and the second inclined portion 13 in a direction forming an angle β satisfying expression (1) with respect to the normal-line direction R, and illumination means 21 which irradiates either of the inclined portions from a direction forming an angle \pm satisfying expression (2) with respect to the normal-line direction R: $30^\circ < \alpha < 35^\circ$, $\beta = \alpha - 180^\circ + \pm 2^\circ$ where α is less than 90° , β is not less than -10° but not more than 10° , and \pm are angles in a turn direction reverse to a turn direction at which either of the inclined portions forms the angle α with respect to the normal-line direction R.

IPC 8 full level
G06K 7/10 (2006.01); **G05B 19/418** (2006.01)

CPC (source: EP US)
G05B 19/128 (2013.01 - EP US); **G06K 7/10792** (2013.01 - EP US); **G06K 19/06037** (2013.01 - EP US); **G06K 19/06046** (2013.01 - EP US); **G06K 19/06159** (2013.01 - EP US); **G05B 2219/31033** (2013.01 - EP US); **G05B 2219/31424** (2013.01 - EP US); **G05B 2219/36371** (2013.01 - EP US); **Y02P 90/02** (2015.11 - EP)

Citation (search report)

- [Y] US 6135350 A 20001024 - WHITE TIMOTHY P [US], et al
- [Y] WO 9222039 A1 19921210 - MIKOH PTY LTD [AU]
- [A] JP 2000298698 A 20001024 - TOHKEN CO LTD
- See references of WO 2009157431A1

Cited by
CN103324903A; US11065659B2; WO2019002687A1; WO2016054647A1; WO2021224028A1; US9573181B2; US9931681B2; US10335842B2; US10618093B2; US10702903B2

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